

CLAIMS

1. A method for making an isomalto-oligosaccharide grain composition said method comprising:
 - (a) contacting a ungelatinized grain containing a starch with a maltogenic enzyme and a starch liquefying enzyme to produce maltose;
 - (b) contacting said maltose with a transglucosidic enzyme, wherein said steps (a) and step (b) occur at a temperature less than or at a starch gelatinization temperature; and
 - (c) obtaining a grain composition having an enzymatically produced isomalto oligosaccharide, wherein said oligosaccharide is derived from said grain.
2. The method according to claim 1, wherein said steps (a) and (b) occur concurrently.
3. The method according to claim 1, further comprising the step of drying said grain composition.
4. The method according to claim 1, wherein said grain is selected from the group consisting of wheat, rye, barley, and malt.
5. The method according to claim 1, wherein said grain is selected from the group consisting of millet, sorghum and rice.
6. The method according to claim 1, wherein said maltogenic enzyme is a beta amylase.
7. The method according to claim 1, wherein said maltogenic enzyme is endogenous to said grain.

8. The method according to claim 1, wherein said starch liquefying enzyme is an alpha amylase derived from a Bacillus.
9. The method according to claim 8, wherein said starch liquefying enzyme is derived from Bacillus licheniformis or Bacillus stearothermophilus.
10. The method according to claim 1, wherein said transglucosidic enzyme is a transglucosidase.
11. The method according to claim 10, wherein said transglucosidase is derived from Aspergillus.
12. The method according to claim 11, wherein said Aspergillus is Aspergillus niger.
13. A grain composition produced according to claim 1.
14. A food additive comprising said grain composition according to claim 13.
15. A flour comprising said grain composition according to claim 13.
16. An isomalto oligosaccharide made according to claim 1.
17. An oral rehydration solution comprising the isomalto oligosaccharide according to claim 16.